

UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS

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METRIS U.S.A., INC., )  
METRIS N.V., )  
METRIS IPR N.V., and )  
3D SCANNERS LTD. )  
Plaintiffs, ) CIVIL ACTION NO.  
 ) 08-CV-11187-PBS  
v. )  
 )  
FARO TECHNOLOGIES, INC., )  
Defendant. )  
 )

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**AMENDED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER**

September 19, 2011

Saris, U.S.D.J.

Introduction

The patents in-suit concern technology used to scan and create highly accurate digital models of three-dimensional physical objects. Metris U.S.A., INC., Metris N.V., Metris IPR N.V., and 3D Scanners Ltd.<sup>1</sup> ("Metris") hold U.S. Patents No. 6,611,617 (the "'617 patent") and 7,313,264 (the "'264 patent"). These patents protect inventions related to the use of an optical laser scanner attached to a six-jointed articulated arm that a user can manipulate around objects in order to image them from

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<sup>1</sup> Metris is now called Nikon Metrology N.V. The Court will continue to refer to the plaintiffs collectively as "Metris."

various perspectives. The development of the inventions is described in detail in my memorandum and order dated May 4, 2011, with which this Court assumes familiarity. See generally, Metris v. Faro Tech., 768 F. Supp. 2d 338 (D. Mass. 2011).

On May 4, 2011, after a five-day evidentiary hearing, this Court found that the '617 patent was unenforceable due to inequitable conduct before the patent office. As to the '264 patent, the Court found that Faro had "failed to meet its steep burden in establishing by clear and convincing evidence" that the named inventor of the '264 patent, Stephen Crampton, intended to deceive the patent office by failing to disclose information that was material to that patent.

Since the issuance of that opinion, the Federal Circuit has caused a sea-change in the law of inequitable conduct. See Therasense, Inc. v. Becton, Dickinson & Co., Nos. 2008-1511, 2008-1512, 2008-1513, 2008-1514, 2008-1595, 2011 WL 2028255 (Fed. Cir. May 25, 2011). Here the Court reexamines its prior holdings in light of the change in law and new arguments related to the '264 patent. Because the Court finds that the challenge to both patents can no longer succeed under the more stringent standard for proving inequitable conduct, the Court vacates its prior finding that the '617 patent is invalid and addresses Faro's motions for summary judgment of noninfringement and Metris's motions for summary judgment on Faro's antitrust and state unfair

competition claims.

## I. Inequitable Conduct

### A. Therasense v. Becton Dickinson and Co.

In Therasense, the Federal Circuit signaled the dramatic constriction of the inequitable conduct doctrine, which it described as a "plagu[e] not only on the courts but also the entire patent system." Id. at \*9. The court "tight[ened] the standards for finding both intent and materiality in order to redirect a doctrine that has been overused to the detriment of the public." Id.

With regard to intent, Therasense held that "to prevail on a claim of inequitable conduct the accused infringer must prove that the patentee acted with the specific intent to deceive the PTO." Id. Specifically relevant to this case, where an inventor is accused of withholding known information, the accused infringer must demonstrate that the inventor "knew of the reference, knew that it was material, and made a deliberate decision to withhold it." Id. The court also warned that lower courts should not infer specific intent based solely on the fact that a reference is deemed highly material: "Proving that the applicant knew of a reference, should have known of its materiality, and decided not to submit it to the PTO does not prove specific intent to deceive." Id. at \*10 (emphasis added).

The court also raised the bar for showing that a reference

is material. Under the new legal standard, "the materiality required to establish inequitable conduct is but-for materiality. When an applicant fails to disclose prior art to the PTO, that prior art is but-for material if the PTO would not have allowed a claim had it been aware of the undisclosed prior art." Id. at \*11.

The court recognized how the changed standard created overlap between the question of inequitable conduct and invalidity: "[I]f a claim is properly invalidated in district court based on the deliberately withheld reference, then that reference is necessarily material. . . ." Id. However, an accused infringer might be able to demonstrate materiality even where it cannot establish invalidity. Because invalidity challenges involve patent claims that have received the imprimatur of the patent office, an accused infringer must establish that the claims at issue are invalid under a clear and convincing evidence standard. Microsoft Corp. v. i4i Ltd. P'ship, 131 S.Ct. 2238, 2242 (2011); but see id. at 2251 ("[N]ew evidence supporting an invalidity defense may 'carry more weight' in an infringement action than evidence previously considered by the PTO."). In contrast, the inequitable conduct doctrine implicates the patent prosecution process itself. Therefore, when analyzing materiality, courts must examine the prior art under the same standards that a patent officer would have relied upon in

deciding whether to allow the claim; a withheld reference is material if it would make a claim unpatentable by a preponderance of the evidence when the claim language is given its broadest reasonable interpretation. See Therasense, 2011 WL 2028255, at \*11 (citing MPEP §§ 706 & 2111).

The court also allowed an exception to the rule requiring but-for materiality where the accused infringer can show that the inventor engaged in "affirmative egregious misconduct." The court reiterated, however, that "neither mere nondisclosure of prior art references to the PTO nor failure to mention prior art references in an affidavit constitutes affirmative egregious misconduct." Id. at \*12.

## **B. '617 patent**

### **1. Sync and Trigger**

With regard to the '617 patent, I found that the inventor Stephen Crampton intended to deceive the patent office by withholding information about Faro arms and their triggering abilities from the patent examiner. Therasense does not affect that conclusion. See id. at \*10 ("[T]o meet the clear and convincing evidence standard, the specific intent to deceive must be the single most reasonable inference able to be drawn from the evidence." (internal quotation marks and citation omitted)).

My findings of materiality, however, have been cast to dust. With regard to non-disclosed materials bearing on inventorship, I

observed that "the inventorship issue here is not-clear cut. [There are] reasons why a patent examiner might not have concluded that Faro should have been among the named inventors of the '617 patent, namely the fact that, in theory, the sync and trigger technology could operate on arms that did not use the Caliper 3D software or the specific hardware in place on the Faro arm." Metris, 768 F. Supp. 2d at 359.

Upon consideration of the evidence in light of the new standard for finding inequitable conduct, I conclude that Faro has not established that the undisclosed information would have altered the patent examiner's finding of inventorship. It is true that at the time of the '617 patent application Faro had produced the only triggerable arm and software that allowed the arm and its position calculator to record position data contemporaneously with the sending of a synchronization signal. See Metris, 768 F. Supp. 2d at 356-60. However, MPEP regulations, which a patent examiner would rely upon in issuing a patent, explain:

"'In arriving at ... conception [the inventor] may consider and adopt ideas and materials derived from many sources ... [such as] a suggestion from an employee, or hired consultant ... so long as he maintains intellectual domination of the work of making the invention down to the successful testing, selecting or rejecting as he goes...even if such suggestion [or material] proves to be the key that unlocks his problem.'"

MPEP § 21.37.01 (quoting Morse v. Porter, 155 USPQ 280, 283 (Bd.

Pat. Inter. 1965)). Based on the evidence presented at trial, I conclude that Crampton maintained intellectual domination of the project throughout his communications with Faro. In fact, the evidence showed that in July 1996, Crampton sent a fax to Faro explicating that in order "to get the most accuracy from the Faro arm we need to trigger it exactly when our sensor records a stripe." (Def's Ex. 21.) He then went on to ask specific questions about how to execute the trigger function on a Faro arm. (Id.) This document is perhaps more relevant to the core of the sync and trigger invention than any other evidence in the record and demonstrates that even after the initial creation of the Data Creator, Crampton maintained control over the pursuit of a solution to the timing problems created by the integration of a laser scanner and a manually operated movable arm.

The question of joint-inventorship is closer. Under the pre-Therasense standard, I found Faro's prolonged and substantial relationship to Crampton, which Crampton never disclosed to the patent office, to be information that a reasonable patent officer would consider important in making a determination about who should be named as inventors. But, under the post-Therasense standard, Faro has not met its burden of proving that the patent would not have been issued to Crampton alone if information about Faro's collaboration had been disclosed. See Metris, 768 F. Supp. 2d at 358. Importantly, even if Faro could show that it

"perform[ed] . . . part of the task which produces the invention," through the triggerable arm and the Caliper 3D software, it never produced evidence that it, or any of its employees, "ever ha[d] 'a firm and definite idea' of the claimed combination as a whole." Ethicon, Inc. v. U.S. Surgical Corp., 135 F.3d 1456, 1460 (Fed. Cir. 1998); see also Nartron Corp. v. Schukra U.S.A. Inc., 558 F.3d 1352, 1356 (Fed. Cir. 2009). In this case, the claim at issue included not only the ability to trigger the arm at a specific point in time in response to a transmission from outside of the arm hardware, but also the mechanism for synchronizing this transmission with the capturing of image data. Faro clearly had ideas about how to trigger its arms and also supplied the software to flag the most recently recorded position data, but there is little in the record to suggest that any Faro employee collaborated on or even considered the use of a single synchronization signal to cause the simultaneous recording of position and image data, the heart of the sync and trigger claim. See Pannu v. Iolab Corp., 155 F.3d 1344, 1351 (Fed. Cir. 1998) (joint inventor must "contribute in some significant manner to the conception or reduction to practice. . . [and] make a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention.").

Faro has also failed to establish that a patent examiner

would have found the claimed inventions obvious if Faro's arm and software had been disclosed during the prosecution. To be sure, a patent examiner may have determined that "even if the existence of the software and the arm hardware would not have dictated the use of a single synchronization signal to solve the problem synch and trigger aimed to resolve, it would seem that such a solution would be 'obvious to try.'" Metris, 768 F. Supp. 2d at 361. However, my findings on materiality were not grounded on a complete enough record to determine that a patent examiner would likely not have issued this patent as a result of obviousness. See id. ("The parties in this case have not fully briefed or argued the Graham factors, and, thus, a full-blown obviousness inquiry is not attainable, but neither is it required."). There is simply not enough of a record to support the more searching analysis called for by Therasense.

Faro argues, however, that it need not show "but for" materiality, because Crampton committed affirmative egregious misconduct in lying in this litigation about his relationship with Faro. I found and continue to believe that Crampton's sworn testimony on this matter was purposefully evasive. In particular, I described his testimony that the Faro arm in his possession in 1994-1995 did not have a port for mounting a laser scanner to be "so beyond the scope of credibility" that it provided evidence of intent to deceive the PTO. Metris, 768 F.

Supp. 2d at 363. Nonetheless, his testimony does not constitute affirmative egregious misconduct as described by the Federal Circuit. The focus of the inequitable conduct inquiry is the inventor's conduct before the patent examiner; often this misconduct will persist during litigation before a court, but it is the affirmative conduct before the patent examiner that serves as the basis for the exception to the "but for" materiality requirement. See Therasense, 2011 WL 2028255, at \*12 (in explaining why affirmative egregious misconduct presents an exception to but for materiality stating, "a patentee is unlikely to go to great lengths to deceive the PTO with a falsehood unless it believes that the falsehood will affect issuance of the patent."). As the Federal Circuit explained, "[b]ecause inequitable conduct renders an entire patent (or even a patent family) unenforceable, as a general rule, this doctrine should only be applied in instances where the patentee's misconduct resulted in the unfair benefit of receiving an unwarranted claim." Id. at \*12.<sup>2</sup> It would unduly stretch the inequitable

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<sup>2</sup> Therasense analogizes to the unclean hands doctrine in explicating the affirmative egregious misconduct exception. Id. at \*12 (exception "incorporates elements" of the unclean hands doctrine"). But a critical difference remains between unclean hands and inequitable conduct, even when inequitable conduct is based on affirmative egregious misconduct: The unclean hands doctrine allows courts to dismiss suits brought by bad faith plaintiffs, whereas the inequitable conduct doctrine results in the unenforceability of the entire patent. Id. at \*4. This remedy, which the Federal Circuit has described as the "atomic bomb" of patent law, id. at \*8, is appropriate only in cases where the patent itself is called into doubt.

conduct doctrine to hold the '617 patent unenforceable under the doctrine of inequitable conduct based on Crampton's misconduct in the litigation after the patent issued.

## **2. Dual Mode**

In my first order, I never addressed inequitable conduct in the prosecution of the dual mode invention of the '617 patent because I found that patent unenforceable due to inequitable conduct in the prosecution of the sync and trigger claim. Metrис, 768 F. Supp. 2d at 336. When I issued that order, I believed that the evidence supporting inequitable conduct with regard to the dual mode invention was not nearly as strong as the evidence related to the sync and trigger invention. I believe the same today.

The best evidence of the existence of dual mode in the prior art is that before Crampton applied for the British patent in 1995, another scanner company, called EOIS, created a laser scanner head that maintained "touch probe" capability. (Trial Tr. Day 4, 30:11-13.) Further, Faro's Caliper 3D software with which Crampton became familiar in his efforts to integrate a Faro arm with a 3D Scanners' laser scanner, included an \_H command, which allowed a user to switch between laser scanner and touch probe data gathering techniques. (Id. at 28-30.)

Putting aside the question of whether these references were material, Faro cannot demonstrate that Crampton specifically

intended to conceal them from the patent office. Crampton's prolonged relationship with Faro included numerous communications regarding features related to the sync and trigger claim, but the same is not true of dual mode. Even if it can be assumed that Crampton was aware of the \_H command, this demonstrates only that he knew some arms could switch between modes. There is no direct evidence that he knew of the EOIS scanner's touch probe capabilities or those of any other scanner, and I find circumstantial evidence insufficient. Therefore, on this issue, Faro has not met its burden of establishing specific intent.

#### **C. '264 patent**

At the initial trial, there was very little argument on inequitable conduct related to the '264 patent, which among other things, claims the use of a digital processor in the housing of the laser line scanner for processing the electrical image data and generating data of reduced quantity. Metris, 768 F. Supp. 2d at 341. On the basis of the sparsity of the record, I found that Faro had failed to meet its steep burden in establishing intent. Since trial, I have allowed the parties to file further briefing (but no new evidence) on this issue. After considering these arguments, I once again find that Faro has failed to establish that Crampton intended to deceive the PTO with regard to this claim, particularly in light of Therasense's tightened standards.

The initial order focused on a patent held by Kreon, a

French laser line scanner company. See U.S. Patent No. 5,424,835 ("'835 patent"). In May 1995, Kreon sued Crampton and 3D Scanners for infringement of the French version of the '835 patent. According to testimony at trial, I found that the '835 patent taught the use of a technique for finding the center of a laser line that is reflected off of an object, known as the center of gravity technique. See Metris, 768 F. Supp. 2d at 349. Although this technique may be material to the '264 patent, I found that Faro had failed to establish that Crampton knew of this feature of the patent and intentionally decided not to disclose it to the PTO. Id.

In the supplemental filings, Faro pointed to the following portions of the record as further illustrations of Crampton and 3D Scanners' familiarity with Kreon. In January or February of 1994, Naval Kapoor of Kreon brought Crampton and 3D Scanners a Kreon I Scanner for Crampton to examine. (Trial Tr. Day 3, 43:7-10.) Crampton was impressed with the technology, noting that the Kreon I sensor was "well engineered - possible too sturdy even." (Def. Ex. 32.) Crampton and 3D Scanners then began working on technology for the Kreon I scanner to operate with 3D Scanners software. (Id. at 46:14-16.) Around this period, Crampton took a Kreon scanner apart to "its barest bits." (Id. at 46:18-22.) Beyond the Kreon I scanner, Crampton was reportedly also aware of the Kreon II scanner by the time he filed the British patent

application in 1995. (Id. at 44-46.) Furthermore, Faro also pointed to further evidence that Crampton was aware of processor in the head in the prior art. Apparently, 3D Scanners possessed Kreon marketing materials that disclosed the sub-pixel calculation of the center of gravity. (Def's Ex. 38.)

Further, by December 1995, 3D Scanners was aware that Faro was attempting to integrate its arm with a Kreon scanner. (Def's Ex. 198.) Stuart Hamilton of 3D Scanners wrote, "I have not seen Kreon's results, my knowledge of their products makes me skeptical about what they may have achieved. To my knowledge they have merely attached an existing scanner to an arm." (Id.)

None of this evidence alters my conclusion that Faro failed to establish intent to deceive the patent office in not disclosing references that he knew were material to the processor in the head claim. First, it is not clear that the Kreon I scanner included the same technology described in the '835 patent. But even if the Kreon scanner that Crampton took apart to its barest bits did include something like a processor in the head, there is no evidence that Crampton was aware of it or deliberately failed to disclose it, as is required under Therasense. Moreover, as I explained in my initial order, there is no evidence that Crampton was made aware of this aspect of Kreon's technology through the French litigation or through any other means, including the marketing materials.

More likely, Crampton was focused on finding a way to improve the integration of scanner and arm technology. In fact, much of the thrust of Faro's argument at trial with regard to Crampton's familiarity with Kreon revolved around his understanding of the mechanism for "registering" the Kreon scanner onto a Faro arm. (See Trial Tr. Day 4, 30-34 (concerning the Kreon brochure used as an exhibit in the French Kreon litigation).) Registration is a process for calibrating a laser scanner and movable arm so that the arm can calculate the position of the end-point of the scanner. As explained in my first order, the registration of a laser scanner to a multiply-jointed arm is not material to the '617 sync and trigger invention. Metris, 768 F.Supp. 2d at 354. It is certainly not material to the processor in the head claim, which does not even concern the integration of a scanner and arm.

The finding that Faro has failed to establish specific intent to deceive the PTO with respect to dual mode is further supported by the complexity of the processor in the head technology. It is not clear that even if Crampton had read the entire '835 patent (or its French precursor) or had fully examined every aspect of a Kreon scanner, he would have known that technology allowing for the determination of the center of gravity of the line was material to the claims of the '264 patent. With regard to the sync and trigger claim,

circumstantial evidence of Crampton's knowledge of Faro's importance to the invention was present in his frequent communications with Faro about the precise issue that Faro alleges was material to the '617 patent. Here, although there may be evidence that Crampton was familiar with Kreon and the Kreon scanner, inequitable conduct, particularly after Therasense, calls for a higher showing of specific intent.

Faro also makes scattered references to the fact that Crampton added the phrase "a multiply-jointed arm having a plurality of arm segments and data communication link to transmit data" to certain claims in the '264 patent after the original patent application was filed and after Faro purportedly had published a patent application that used the phrase "arm segments." Of the asserted claims, the term "plurality of arm segments" now appears in claims 1-6, 11-13, 16, and 26-34 of the '264 patent. According to Faro, the added language is "new matter" not included in the parent '617 patent or in the 1995 British patent application. Faro further argues that "arm segment" refers to Faro's innovative improvements to the accuracy of its arms by using "modular bearing cartridges" in each of the arm joints. (See Def's Ex. 64 ("Kurfess Rep."), at ¶ 87.)

At trial, Faro pressed this argument in a perfunctory manner. In fact, the Faro patent application that allegedly

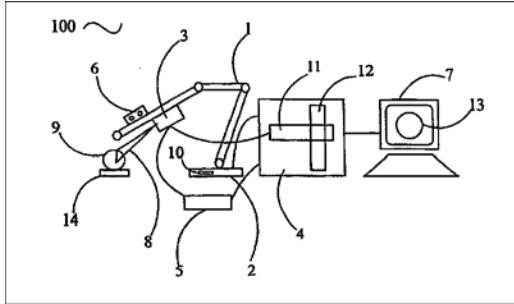
included the "arm segment" language serving as the basis for Crampton's amendment was not even introduced at trial.

But even if this argument had been more forcefully pursued, it would have been unavailing. Although Faro does not specify the legal import of its factual arguments, a finding that the '264 patent included impermissible new matter could theoretically produce at least two outcomes. First, I could find that Crampton's failure to disclose this fact to the patent office constituted inequitable conduct. Cf. Rainbow Rewards, USA, Inc. v. Source, Inc., 07-00239, 2007 WL 4365669 (D. Colo. Dec. 10, 2007) (discussing claims of inequitable conduct alleging that patentee had styled certain patent applications as continuation applications even though they contained new matter). Alternatively, a finding of new matter would support a holding that the '264 patent cannot benefit from the priority date of the parent applications. See Tronzo v. Biomet, Inc., 156 F.3d 1154, 1158 (Fed. Cir. 1998).

But before arriving at either of these outcomes, I must find that the additions to the '264 patent are indeed new matter. The restriction on new matter originates in the "written description" requirement. "It is elementary patent law that a patent application is entitled to the benefit of the filing date of an earlier filed application only if the disclosure of the earlier application provides support for the claims of the later

application, as required by 35 U.S.C. § 112." Poweroasis, Inc. v. T-Mobile USA, Inc., 522 F.3d 1299, 1306 (Fed. Cir. 2008) (quoting In re Chu, 66 F.3d 292, 297 (Fed. Cir. 1995)) (internal quotation marks omitted). "To satisfy the written description requirement the disclosure of the prior application must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the invention." Id. (internal quotation marks, citations, and alterations omitted). "A disclosure in a parent application that merely renders the later-claimed invention obvious is not sufficient to meet the written description requirement; the disclosure must describe the claimed invention with all its limitations." Tronzo, 156 F.3d at 1158.

Here, a plain language reading of the '617 patent and its specification reveals that the patent discloses the use of a "plurality of arm segments." The term "segment" has a broad everyday definition as "one of the parts into which something is divided; a division, portion, or section." Random House Webster's College Dictionary 1214 (1991). The '617 patent specification uses very similar language when describing that "[m]ultiply jointed arms commonly comprise multiple linkages and are available for scanning complex objects." '617 patent, col. 2, ll. 32-35. Moreover, the figures in the '617 and '264 patents illustrate segmented arms. Figure 1 is a prime example:



'617 patent, fig. 1. By lay eye, the arm depicted here fairly clearly includes segments.

In response, Faro argues that this illustration depicts a "stick figure," and suggests through its expert that the term "arm segment" should be defined with reference to Faro innovations, which have involved placing complicated bearings on each of the arm joints. (See Kurfess Rep., at ¶ 87.) It may be true that Faro's linkages were more sophisticated than the simple joints present in early arms and the '617 specification, but this does not mean that one with ordinary skill in the art would find that the term "arm segment" so evokes this new technology that the term is not disclosed by a patent that refers to simple arm linkages. Faro did not introduce any evidence to suggest the contrary.

## **II. Antitrust and Unfair Competition Claims**

Faro has asserted federal antitrust and state unfair competition counter-claims, and Metris has moved for summary judgment on these claims.

### **A. Antitrust Claims**

Generally patent protection provides an exception to the strictures of antitrust law. See Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 816 (1945) (A patent "is an exception to the general rule against monopolies and to the right to access to a free and open market"). However, the Federal Circuit has instructed, "A patentee who brings an infringement suit may be subject to antitrust liability for the anti-competitive effects of that suit if the alleged infringer (the antitrust plaintiff) proves (1) that the asserted patent was obtained through knowing and willful fraud. . . or (2) that the infringement suit was a mere sham to cover what is actually nothing more than an attempt to interfere directly with the business relationships of a competitor." Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059, 1068 (Fed. Cir. 1998) (citations and internal quotation marks omitted).

The first prong of this test refers to the analysis set out by the Supreme Court in Walker Proc. Equip. v. Food Mach. & Chem. Corp., 382 U.S. 172 (1965). The second refers to the "sham litigation" theory of antitrust liability. Count VII of Faro's Answer asserts a counter claim of Walker Process fraud as a basis for antitrust liability. (Doc. 130.) Count VIII is based on a sham litigation theory. (Id. (citing Handqards, Inc. v. Ethicon, Inc., 743 F.2d 1282, 1288 (9th Cir. 1984)).

### 1. Walker Process

In Walker Process, the Supreme Court held that proof that a patentee obtained a patent by "knowingly and willfully misrepresenting facts to the Patent Office" is sufficient to strip a patentee of its protections from antitrust laws. Walker Process, 382 U.S. at 177.

Since Walker Process, courts have had occasion to address the relationship between its holdings and the inequitable conduct doctrine. The Walker Process court cited many of the same early unclean hands cases that Therasense has described as the foundation of inequitable conduct law. See id. (citing Keystone Driller Co. v. Gen. Excavator Co., 290 U.S. 240 (1933), Hazel-Atlas Glass Co. v. Hartford-Empire Co., 322 U.S. 238 (1944), Precision Instrument Mfg. Co. v. Auto. Maint. Mach., 324 U.S. 806 (1945)). However, as described above, between the development of the unclean hands doctrine and Therasense, the inequitable conduct doctrine progressively expanded to incorporate less serious forms of wrongdoing. On this basis, in the past, a finding of inequitable conduct did not necessarily dictate a finding of Walker Process liability. See Argus Chem. Corp. v. Fibre Glass-Evercoat Co., Inc., 812 F.2d 1381, 1384 (Fed. Cir. 1987). Conversely, because Walker Process liability was founded upon the same type of wrongdoing before the PTO as inequitable conduct, but required a higher showing of both materiality and

intent, a finding of inequitable conduct was a prerequisite for a showing of Walker Process fraud. See Dippin' Dots, Inc., 476 F.3d 1337, 1346 (Fed. Cir. 2007) ("To demonstrate Walker Process fraud, a claimant must make higher showings of both materiality and intent than are required to show inequitable conduct."); FMC Corp. v. Manitowoc Co., Inc., 835 F.2d 1411, 1417 (Fed. Cir. 1987) ("[F]ailure to establish inequitable conduct precludes a determination that the [party making antitrust claims] had borne its greater burden of establishing the fraud required to support its Walker Process claim.").

Since Therasense, no court has had an opportunity to fully examine the relationship between Walker Process liability and inequitable conduct. But see TransWeb LLC v. 3M Innovative Prop. Co., 10-4413, 2011 WL 2181189, at \*12 (D.N.J. June 1, 2011) ("Therasense. . . provided no indication that the elements of Walker Process fraud changed."). But it appears that Walker Process fraud is now largely coextensive with the new inequitable conduct doctrine. With regard to materiality, the Federal Circuit has explained that "[t]he heightened standard of materiality in a Walker Process case requires that the patent would have issued but for the patent examiner's justifiable reliance on the patentee's misrepresentation or omission." Dippin' Dots, Inc., 476 F.3d at 1346-47.

As articulated by the Federal Circuit, the intent prong of the Walker Process fraud test is not as precisely congruent with Therasense. The Federal Circuit has explained that Walker Process fraud "is a variant of common law fraud and that the elements of common law fraud include: (1) a representation of a material fact, (2) the falsity of that representation, and (3) the intent to deceive or, at least, a state of mind so reckless as to the consequences that it is held to be the equivalent of intent (scienter)." Hydril Co. LP v. Grant Pridaco LP, 474 F.3d 1334, 1349 (Fed. Cir. 2007). Therasense does not fully explore whether a state of mind may be so reckless as to be the equivalent of specific intent. Nonetheless, there is no reason to distinguish between the standards on this account. The leap between recklessness and intent is a common one, even in criminal law. See, e.g., Willis v. United States, 87 F.3d 1004, 1007-08 (8th Cir. 1996). Furthermore, under both doctrines the intent to deceive must be established by "clear and convincing" evidence. See Unitherm Food Sys. Inc. v. Swift Eckrich, Inc., 375 F.3d 1341, 1360 (Fed. Cir. 2004), rev'd on other grounds 126 S. Ct. 980 (2006).

The question here, then, is whether my finding of no inequitable conduct resolves the Walker Process issue. Federal Circuit case law could be read to suggest that a finding of no inequitable conduct necessarily precludes a finding that the

patents at issue were obtained through fraud before the patent office. See FMC Corp., 835 F.2d at 1418 ("[T]hose seeking unenforceability [are] seen as raising a shield and those seeking antitrust damages as unsheathing a sword. FMC broke its Walker Process sword when it failed to establish inequitable conduct."). Metris has assumed this proposition to be the case, and Faro has not urged a different analysis.

There may, however, be reason to doubt this principle now. If a judge's determination of no inequitable conduct precluded a jury from later finding Walker Process fraud as a matter of law, then a viable argument could be made that the doctrines would collide with the protections afforded Walker Process claimants by the Seventh Amendment. See Beacon Theatres, Inc. v. Westover, 359 U.S. 500, 510 (1959); Shum v. Intel Corp., 499 F.3d 1272, 1279 (Fed. Cir. 2007); Cabinet Vision v. Cabinetware, 129 F.3d 595, 600 (Fed. Cir. 1997) (finding that a "Walker Process counterclaim and an affirmative defense of inequitable conduct share common factual elements" and thereby concluding that a district court had erred in overriding a jury's fact-finding on a Walker Process claim under the auspices of addressing an inequitable conduct claim). It appears, then, that the foundation of the proposition that a finding of no inequitable conduct forecloses Walker Process fraud claims was the difference between the Walker Process fraud and inequitable conduct standards. Because it was

more difficult to establish Walker Process fraud, a finding of no inequitable conduct, even if by a judge, would almost certainly mean that no jury could find that the facts at issue were sufficient to meet the higher standard of Walker Process fraud.

See SanDisk Corp. V. STMicroelectronics, Inc., No. C. 04-4379, 2009 WL 1404689, \*2 (N.D. Cal. May 19, 2009) ("[J]ust as a finding of inequitable conduct may moot SanDisk's patent infringement claim, a finding that SanDisk did not engage in inequitable conduct may moot ST's Walker Process claim, as '[a] finding of Walker Process fraud requires higher threshold showings of both intent and materiality than does a finding of inequitable conduct.'" (quoting Nobelpharma AB, 141 F.3d at 1071)). Therasense may, therefore, provide reason to reexamine the general rule that a finding of no inequitable conduct precludes Walker Process liability.

In any event, even if this legal principle has been unsettled by the fact that test for inequitable conduct has been brought into line with the test for Walker Process fraud, Faro's claim fails. There is insufficient evidence in the record, even taking into account all of the evidence presented at the inequitable conduct trial, for a reasonable fact-finder to conclude that a patent officer would not have issued the '617 patent to Crampton if she had access to information about Faro.

Therefore, I allow Metris' motion for summary judgment on Faro's Walker Process fraud claim.

## **2. Sham Litigation**

The "sham litigation" theory allows accused infringers to bring antitrust claims where it can be shown that "(1) the lawsuit [is] objectively meritless such that 'no reasonable litigant could expect success on the merits' and (2) . . . that 'the baseless lawsuit conceals an attempt to interfere directly with the business relationships of a competitor.'" C.R., Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1368 (Fed. Cir. 1998).

Given the other issues at stake in the litigation, Faro cannot demonstrate that the suit is objectively meritless. Although a fact-finder may ultimately determine that there was no infringement on the '264 patent or that this patent is invalid, Metris' claims have at least enough merit to withstand summary judgment. With regard to the '617 patent, for the reasons discussed below, the issue of infringement is not so open-and-shut that Metris' assertion of this patent is baseless. Because Faro cannot meet the second prong of the "sham litigation" test, the Court need not reach the question of whether Metris is attempting to use the litigation itself to interfere with Faro's business. See Nobelpharma, 141 F.3d at 1072 ("[I]f a suit is not objectively baseless an antitrust defendant's subjective motivation is immaterial.").

**B) c. 93A claims**

Faro's state unfair competition claims also fail. As a preliminary matter, the law is clear that state law claims are preempted to the extent that they are founded solely on misconduct before the PTO. See Abbott Lab. v. Brennan, 952 F.2d 1346, 1355 (Fed. Cir. 1998). The facts that serve as the basis for the inequitable conduct claim can, therefore, not serve as the sole basis for a c. 93A claim.

Faro argues that this claim escapes preemption, however, because it is founded upon 3D Scanners and Crampton's continued unfair competition since the issuance of the patent. It points in particular to the March 2003 email and to a communication from February 18, 2004, in which Crampton stated that he intended to "put [Kreon] out of business. . . [and] get [its] customer list. . . ." (Def's Ex. 69,) as evidence that Crampton's enforcement of the patent was in bad faith.

It is true that bad faith enforcement of the patent, if alleged as a basis for state tort liability, may bring the state tort claim outside the ambit of federal preemption. See Zenith Elecs. Corp. v. Exzec, Inc., 182 F.3d 1340, 1353 (Fed.Cir.1999) ("[F]ederal patent law bars the imposition of liability [under federal or state law] for publicizing a patent in the marketplace unless the plaintiff can show that the patent holder acted in bad faith."). However, the test for bad faith in this context is

substantially the same as the test for determining whether bad faith enforcement supports a sham litigation theory of antitrust liability. See 800 Adept, Inc. v. Murex Sec., Ltd., 539 F.3d 1354, 1370 (Fed. Cir. 2008) ("This bad faith standard has objective and subjective components. The objective component requires a showing that the infringement allegations are objectively baseless. The subjective component relates to a showing that the patentee in enforcing the patent demonstrated subjective bad faith."). Even if these emails suggest subjective bad faith, they do not change the analysis that Faro cannot demonstrate that the enforcement of the patent is objectively baseless.

Nor can Faro point to any other evidence of unfair competition beyond enforcement of the patent. All Faro can show through the emails is that Crampton had bad intent. Therefore, at its heart, Faro's state unfair competition counterclaim is based upon Crampton's conduct before the PTO, and the resulting enforcement of a patent obtained through fraud; this alleged misconduct gives rise to federal claims only.

### **III. Non-Infringement**

In order to allow summary judgment of non-infringement, the Court must conclude that when all of the reasonable inferences are drawn in Metris' favor, no reasonable fact-finder could find that the accused product either literally or through equivalents

infringes the asserted claims of Metris' patents. Abbott Laboratories v. Sandoz, Inc., 566 F.3d 1282, 1288 (Fed. Cir. 2009).

#### **A. '617 patent**

The crux of Faro's argument of non-infringement of the '617 patent concerns the purported absence of a "position calculator" in the accused Faro product. As explained in this Court's May 4 order, "For the purposes of creating a three-dimensional image of an object, the data an optical or laser scanner captures is meaningless if the user cannot determine where the scanner was located relative to that object when it captured the image. This means that while a scanning device collects data on the object itself, it must also collect data on the position and orientation of the scanner." Metris, 768 F. Supp. 2d at 340. In Faro's prior products, including both the Bronze and Silver Faro arms, a serial box, otherwise known as a position calculator, served as an intermediary between the host computer and the manually operated multi-jointed arm. See U.S. Patent No. 5,402,582 (the "'582 patent"), fig. 1. In broad strokes, the purpose of the position calculator in these products was the "preprocessing [of] position data prior to transfer. . .said position data to a host computer." '582 patent, col. 15, ll. 19-21.

In the accused Faro arm, there is no separate position calculator serving as an intermediary between the arm and the

host computer, where position and orientation data are combined with data collected by the laser scanner to generate three-dimensional data relating to the scanned object. (See Kurfess Rep., at ¶ 94.) Instead, each of the arm's joints contains an encoder that measures data related to the angle of that particular joint and relays this data to the host computer in response to a signal sent from the base of the arm. (See id., at 95.)

Claim 1 of the '617 patent claims:

[A] Scanning apparatus for scanning an object to generate three-dimensional data, comprising:  
a scanner mounted on a multiply-jointed arm for movement by an operator to scan the object to capture data from a plurality of points on the surface of the object, the scanner comprising:  
a light source operable to emit light onto the object surface; and  
a light detector operable to detect light reflected from the object surface by recording reflected light at recording times defined by a synchronization signal;  
a position calculator for calculating the position of the multiply-jointed arm, and outputting position data defining the position in response to a trigger pulse;  
a trigger pulse generator for receiving the synchronization signal for the light detector defining the recording times thereof, and, in response thereto, generating and outputting trigger pulses to the position calculator to cause the position calculator to output position data for each of at least some of the recordings by the light detector; and  
a three dimensional data generator for receiving recorded data output by the light detector and associated position data output from the position calculator, and for processing the data to generate three-dimensional data relating to the object.

'617 patent, col. 29, ll. 34-60 (emphasis added). Of critical importance here is the language emphasized regarding the "position calculator." At claim construction, this Court addressed the proper construction of many of the terms relevant to this particular dispute. However, the proper scope of some of these terms was ultimately agreed upon by the parties. (See Joint Statement of Agreed Upon Claim Terms, Nov. 11, 2009, Doc. 81.) Specifically the parties agreed that a position calculator should be understood as "A device with a program for calculating the position of the multiply-jointed arm, and outputting position data defining the position in response to a trigger pulse." (Id.) Although the claim 1 language regarding the position calculator is not used in every one of the asserted claims, all of the claims at issue use the term "position calculator," and thus incorporate the agreed upon definition of position calculator. See '617 patent, col. 30, l. 7 (claim 2); col. 31, l. 7 (claim 4). The parties further agreed that the term "position data" refers to "data defining positions relating to a multiply-jointed arm." (Id.)

There is no dispute that the accused products do not include a separate device that acts as an intermediary between the arm's joints and the host computer, but Metris asserts that a reasonable fact-finder could find that the network of encoders, or Digital Signal Processors (DSPs), associated with each arm

joint constitute a position calculator under the claim language of the '617 patent as agreed upon by the parties. Such a finding would require a fact-finder to arrive at a number of conclusions: 1) that a position calculator can be constituted by a network of devices existing within the arm; 2) that the DSPs are a device with a program for calculating the position of the arm; 3) that the DSPs receive trigger pulses; and 4) that in response to these trigger pulses the DSPs output position data. The Court finds that even if Metris can raise genuine issues of material fact with regard to some of these conclusions, no reasonable fact-finder could find that the DSPs are a "device with a program for calculating the position of the arm."

### **1. Literal Infringement.**

Although the precise mechanism of the DSPs in the accused product is opaque, according to Dr. Hager, Metris's expert, the DSPs are signaled by software to "calculate (among other calculations) the rotation count [of a particular joint], which is a measure of the joint's rotation angle." (Pl.'s Ex. A. ("Hager Rep."), at ¶ 63.)) In general, this "calculation" occurs when a light source is projected through disks attached to a body that rotates around an axis. The disks are made up of some transparent and some opaque bands, and the rotation of the body can be determined by measuring the light as it projects through the disks. (Id.)

Faro briefly challenges that the DSPs are "a device with a program" but does not provide any evidence to refute Dr. Hager's account. (Reply Br., Doc. 233, at 9.) Furthermore, the fact that Faro describes the devices as "digital signal processors," belies this fleeting suggestion. Without anything more, the Court is unwilling to conclude that a reasonable fact-finder could not find that the DSPs include a "program."

But Metris must do more than establish that the position calculator is a device with a program. It must also prove that the DSPs are, under the definition agreed to by the parties, "for calculating the position of the multiply-jointed arm." Based on the undisputed language, I find that the DSPs do not literally infringe this language.

The claim term "position of the arm" plainly refers to the end-point of the arm, where the scanner is attached. As discussed above, this is the only position on the arm that matters for the purpose of the invention. Cf. Minn. Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d 1559, 1567 (Fed. Cir. 1992) (interpreting otherwise arguably indefinite term such that it was consistent with the purpose of the invention). Further, this construction is supported by the juxtaposition of the language "position of the arm" with "position data." In contrast to the pluralized term "position data," which the parties have construed broadly, the term "position of the arm"

refers to a single piece of information; again, given the way that image and position data are paired, the single most important piece of information regarding the arm is the position of the end-point of the arm. If the purpose of the position calculator were merely the calculation of various pieces of data related to the position of the arm, the claim language would have used the term "position data" in the first clause of the definition of position calculator just as it did in the second clause when describing what the position calculator outputs.

But the DSPs do not calculate the position of the arm. The DSPs transmit raw rotation counts that must be combined with other information, including the temperature of the arm, in order to determine the angle of the rotation of the joints. Although Faro disputes that this raw-count data can constitute "position data" under the second clause of the definition of position calculator, the Court need not reach this question because, even if the raw-count data is understood as angular data "related to the position of the arm," it does not amount to "the position of the arm," as the first clause of the definition requires. Therefore, the DSPs cannot serve as the position calculator in determining whether the accused product literally infringes the '617 patent.

Metris cannot avoid this conclusion by arguing that the position calculator is within the host computer, which in the

accused product also serves as the three-dimensional data generator. (See Hager Rep., at 78 ("The COG data. . . is combined in a buffer with the position data returned by the mid-DSPs. . . and is sent to the host computer for further processing. . . ."). First, though there is no language in the claims that requires that the position calculator be a separate device from the multiply-jointed arm, there is language that suggests that the position calculator must be a separate device from the three-dimensional data generator. Most importantly, the definition of position calculator states that the position calculator "output [s]" position data in response to a trigger pulse and the claim language specifies that the three-dimensional data generator "receiv[es] recorded data output by the light detector and associated position data output from the position calculator."

Second, the definition of position calculator requires that the position calculator output position data in response to a trigger pulse. Because there is no dispute that the host computer in the accused device does not receive a trigger pulse, the accused device cannot literally infringe the '617 patent. (See Hager Rep., at ¶¶ 60-61.)

## **2. Doctrine of Equivalents**

Under the doctrine of equivalents, an accused device or process infringes a patent if it contains "elements. . .

equivalent to each claimed element of the patented invention."  
Warner-Jenkinson Co., Inc. v. Hilton Davis Chem., 520 U.S. 17, 40 (1997). "Infringement may be found under the doctrine of equivalents if every limitation of the asserted claim, or its 'equivalent,' is found in the accused subject matter, where an 'equivalent' differs from the claimed limitation only insubstantially." Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 149 F.3d 1309, 1315 (Fed. Cir. 1998). In addressing this question a fact-finder is not bound by any particular linguistic formulation of what makes any single element equivalent to another, but "special vigilance [must be paid to ensure] against allowing the concept of equivalence to eliminate completely any such elements. . . ." Warner-Jenkinson, 520 U.S. at 40.

This final principle, known as the all-elements rule or the all-limitations rule, is the judicial counterweight to the doctrine of equivalents. See Ethicon, 149 F.3d at 1317 (observing that the rule is better understood as applying to claim "limitation" as opposed to "elements" because it is the limitation of a claim that counts in determining both validity and infringement." (internal quotation marks and citation omitted)). "[T]he 'all elements' rule forecloses resort to the doctrine of equivalents [when] on the facts or theories presented in a case, a limitation would be read completely out of the claim - i.e., the limitation would be effectively removed or

'vitiated.'" Dupey Spine, Inc. v. Medtronic Sofamor Danek, Inc., 469 F.3d 1005, 1017 (Fed. Cir. 2006). Although there is considerable difficulty in applying the doctrine, the Supreme Court has provided the following guidance: "Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole." Warner-Jenkinson, 520 U.S. at 29. Whereas generally the question of equivalence is a question of fact, the application of the all-elements rule is a question of law for the court. See Cordis Corp. v. Boston Scientific Corp., 561 F.3d 1319, 1330 (Fed. Cir. 2009).

The Court concludes that application of the doctrine of equivalents as a basis for finding that the accused device infringes the '617 patent would vitiate the limitation in the definition of position calculator that the calculation of position occur in the position calculator, separate from the three-dimensional data generator. As a corollary of this holding, I also find that no reasonable fact-finder could conclude that the difference between performing the position calculation in the position calculator versus performing it in the host computer, which also holds the three-dimensional image processor, is insubstantial. See Nystrom v. Trex. Co., Inc., 580 F.3d 1281, 1286-87 (Fed. Cir. 2009) (Rader, J. concurring)

(noting that the "vitiation doctrine is really subsumed within the test for equivalents itself" in that "a finding of insubstantial difference. . . obviates any further vitiation analysis," whereas, "a finding of substantial difference renders vitiation unnecessary," and further observing that despite this overlap, the doctrines differ in that vitiation addressed by a judge whereas equivalence is addressed by a jury).

In Dolly, Inc. v. Spalding & Evenflo Co., Inc., 16 F.3d 394 (Fed. Cir. 1994), the Federal Circuit explained that "the doctrine of equivalents does not require a one-to-one correspondence between components of the accused device and the claimed invention." Id. at 398 (citing Intel Corp. v. Int'l Trade Comm'n, 946 F.2d 821, 832 (Fed. Cir. 1991)). "An accused device may infringe under the doctrine of equivalents even though a combination of its components performs a function performed by a single element in the patented invention. . . [as long as it] contain[s] every limitation of its equivalent." Id. Similarly, "[e]quivalency can also exist when separate claim limitations are combined into a single component of the accused device." Id.

At first blush, the accused product may appear to fall in the first category. Although the position calculator (or the DSPs) does not calculate the position of the arm, a reasonable fact-finder could conclude that this function is performed within the host computer, which also serves as the three-dimensional

image processor.<sup>3</sup> Because the DSPs output position data in response to a trigger pulse coordinated with image collection, the three-dimensional image processor is still able to combine position information with correlating image data. The only difference is that in the accused device the conversion of position data into the position of the arm occurs within the three-dimensional image processor, as opposed to the position calculator.

But, because of the explicit claim language, the doctrine of equivalents is inapplicable. The definition of the term "position calculator," by specifying that the position calculator outputs position data to the three-dimensional image calculator,<sup>4</sup> requires that the calculating of the position of the arm be performed in a separate component from the three-dimensional image processor. In short, the definition of position calculator includes not only a functional but also a structural limitation.

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<sup>3</sup> It is not entirely clear whether the calculation of the position and orientation of the arm in the accused device is a discrete computational step, separate from the combination of position data and image data. Even assuming that the host computer actually "calculates" the position of the arm, however, Metris' infringement claim still fails.

<sup>4</sup> This requirement is expressed in the definition of "position calculator," which describes that the component is for "calculating the position of the multiply-jointed arm, and outputting position data defining the position in response to a trigger pulse" and the claim language specifying that the three-dimensional image generator is for "receiving. . . position data output from the position calculator." See, e.g., '617 patent, col. 29, ll. 58-59.

See Dolly, 16 F.3d at 398 (finding that the fact that the accused product performed a function relying on components that the patent expressly stated could not perform the function prevented a finding of infringement by equivalents). As such, Metris's reading would vitiate this claim limitation.

Metris at times also argues that the accused product may infringe by equivalents because, even if its position calculator does not calculate the position of the arm, it records data that can very easily be transformed into the position of the arm. This argument also fails to take into account the express limitations inherent in the definition of position calculator. The dictionary definition of the verb calculate is "to determine or ascertain by mathematical methods." Random House Webster's College Dictionary 193 (1992). Neither this definition, nor the common understanding of the term, requires that the calculation be difficult. In fact, the mathematical computation required to transform angular data into position data is exactly the kind of problem that would normally be performed on a "calculator." Finding that the raw-count data is so easily transformable into the position of the arm that the accused product infringes by equivalents reads out the limitation that the position calculator must be the component that performs this calculation.

Moreover, the position calculator in the '617 patent performs a critical function in that it serves as an intermediary

between the arm and the three-dimensional image processor and is for calculating the position of the arm. As Dr. Hager opines, this "calculation" may be easily performed based solely on angular measurements, but the calculation must also be performed in real-time as the arm is manipulated around an object. The position calculator, thus, performs an important function, and any device that does not rely on the position calculator to perform this function is substantially different from the protected invention.

#### **B. '264 patent**

Faro's argument that the accused product does not infringe the '264 patent revolves around the purported absence of a data processor within the housing of the scanner. Claim 1 of the '264 patent reads as follows:

A scanning apparatus, comprising:  
a multiply-jointed arm having a plurality of arm segments and a data communication link to transmit data; and  
a scanner mounted on an arm segment of the multiply-jointed arm for movement therewith to capture data from a plurality of points on a surface of an object, the scanner having a housing enclosing:

- (a) a light source operable to emit light onto the object surface;
- (b) a light detector operable to detect light reflected from the object surface and to generate electrical image data signals in dependence upon the detected light; and
- (c) a data processor operable to process the electrical image data signals to generate processed data of reduced quantity, the data processor being connected to the data communication link to transmit the processed data therealong.

Of importance to this dispute is the data processor within the scanner housing. The parties have agreed that "data processor operable to process the electrical image data signals to generate processed data of reduced quantity" should be construed as "a device with a program which performs computations to modify manipulate, or transform electrical image data signals to generate processed data of reduced quantity."

Metris argues that a DSP within the scanner housing of the accused product falls within this element of the claim. This DSP uses special software algorithms to compute each frame of image data in order to determine the precise location of the measured object with sub-pixel accuracy. (MacFarlane Dep., at ¶ 29.) It performs this function through a method known as the center of gravity technique. This technique measures the "weighted average" of the laser stripe that is projected onto an object and reflected back to a scanner. (Kurfess Rep., 106.) The scanner head on the accused Faro device initially captures more pixels of data than the apparatus needs to determine the location of the object's surface. The DSP, through use of the center of gravity technique, is able to winnow this data down to what is necessary to determine the location of the object. It then transmits this data to the host computer where it is combined with data related to the position of the arm in order to produce a three-dimensional image of the scanned object. By reducing the data

that the scanner head transmits, Faro is able to speed up the operations of the apparatus. (See MacFarlane Dep., 101:14-18.)

Faro does not dispute that the DSP is within the scanner housing or that it reduces the quantity of the data that the scanner initially captures. Instead, Faro argues that because the data synthesized by the DSP is not three-dimensional image data, but rather, is one-dimensional pixel data, it is not "electrical image data" within the language of the claim. In the accused product, the synthesis of three-dimensional data occurs when the center of gravity is combined with arm position data within the three-dimensional data processor on the host computer. Because this function occurs outside of the scanner housing, Faro argues that the accused product does not have a data processor within the scanner housing, as the patent requires.

But the plain language of the claim does not specify that "electrical image data signals" refers only to three-dimensional image data. In fact, on one reading, claim one appears to presume that the three-dimensional data manipulation will occur outside of the scanner housing. Both parties agree that in order to render three-dimensional data, the apparatus must combine laser image data with information regarding the position of the arm. In claim one of the '264 patent, however, there is no limitation that arm position data must be run into the scanner head. Instead, the "therewith" language indicates that image

data will be passed via the data communication link outside of the scanner head and into the arm. Under this account, electrical image data cannot possibly refer only to three-dimensional image data, because the device will not generate three-dimensional image data until the initial data captured by the laser line scanner is combined with data regarding the position of the arm.

Faro's argument that the data manipulated by the DSP within the scanner housing is not "electrical image data" is based mainly on the '264 patent specification's reference to the possibility of moving the host computer into the scanner housing: "As computing power becomes faster and more compact, it will be possible to encapsulate the computer. . . in the probe. . . as well as having the display. . . mounted on the probe. The probe might have memory. . . which could be both dynamic memory and magnetic memory, such as a CD-ROM or digital video disk." '264 patent, col. 20, ll. 32-37. The quoted language indeed seems to envision the possibility of performing the full three-dimensional image synthesis in the scanner head. However, the specification does not overwhelm the language of the claim, which, interpreted according to its ordinary meaning, refers to "electrical data image signals" processed by the processor in the head, a term which could include one- or two-dimensional data initially captured by the scanner head. See Johnson Worldwide Assoc., Inc.

v. Zebco Corp., 175 F.3d 985, 989-90 (Fed. Cir. 1999) ("[C]laim terms cannot be narrowed by reference to the written description or prosecution history unless the language of the claims invites reference to those sources.").

**ORDER**

The Court vacates its May 4, 2011 decision holding the '617 patent unenforceable for inequitable conduct (Doc. 309). It **Allows** Metris' motion for summary judgment with regard to Faro's unfair competition and antitrust claims on the '264 patent and '617 patent (Doc. 246), and it **DENIES** Faro's motion for summary judgment of non-infringement on the '264 patent but **Allows** the motion for summary judgment of non-infringement with regard to the '617 patent (Doc. 145).

/s/ PATTI B. SARIS  
PATTI B. SARIS  
United States District Judge